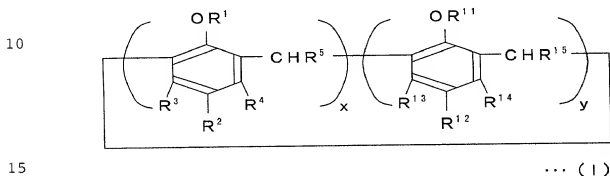


# CLAIMS

1. A color imaging toner, comprising at least a binder resin and a colorant, which is used in an imaging process employing a photofixing system, said imaging color toner further comprising a combination of:

a calixarene compound represented by the following formula (I):



wherein  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$ ,  $\text{R}^4$  and  $\text{R}^5$  may be the same or different and each represents a hydrogen atom, an alkyl group, a group of  $-(\text{CH}_2)_m\text{COOR}^{10}$  in which  $\text{R}^{10}$  represents a hydrogen atom or an alkyl group, and  $m$  represents a positive integer, a group of  $-\text{N}(\text{R}^7)_2$  in which  $\text{R}^7$  represents an oxygen atom, a hydrogen atom or an alkyl group, a group of  $-\text{SO}_3\text{R}^8$  in which  $\text{R}^8$  represents a hydrogen atom or an alkyl group, an aryl group or a group of  $-\text{Si}(\text{CH}_3)_3$ ,

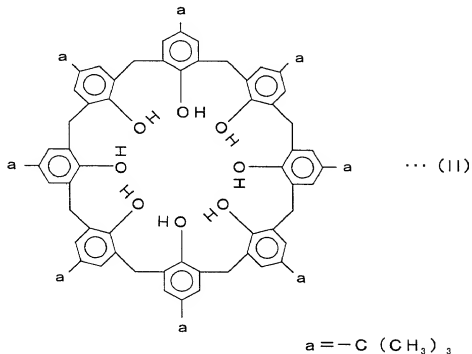
$\text{R}^{11}$ ,  $\text{R}^{12}$ ,  $\text{R}^{13}$ ,  $\text{R}^{14}$  and  $\text{R}^{15}$  may be the same or different and each represents a hydrogen atom, an alkyl group, a group of  $-(\text{CH}_2)_m\text{COOR}^{20}$  in which  $\text{R}^{20}$  represents a hydrogen atom or an alkyl group, and  $m$  represents a positive integer, a group of  $-\text{N}(\text{R}^{17})_2$  in which  $\text{R}^{17}$  represents an oxygen atom, a hydrogen atom or an alkyl group, a group of  $-\text{SO}_3\text{R}^{18}$  in which  $\text{R}^{18}$  represents a hydrogen atom or an alkyl group, an aryl group or a group of  $-\text{Si}(\text{CH}_3)_3$ , and

$x$  and  $y$  each represents 0 or a positive integer, and

an infrared absorbing compound which shows a light absorption peak at a wavelength ranging from 700

to 1000 nm.

2. The color imaging toner according to claim 1, wherein the calixarene compound is a compound of the following formula (II):



3. The color imaging toner according to claim 1 or 2, wherein the infrared absorbing compound is phthalocyanine, naphthalocyanine or a mixture thereof.

4. The color imaging toner according to claim 1 or 2, wherein 100 parts by weight of a toner is mixed with 0.1 to 10 parts by weight of the calixarene compound and 0.01 to 5 parts by weight of the infrared absorbing compound.

5. The color imaging toner according to claim 1 or 2, wherein the photofixing system is used at a light emission energy density ranging from 1.0 to 6.0 J/cm<sup>2</sup>.

6. The color imaging toner according to claim 1 or 2, wherein the color toner is used in an electrophotographic imaging process employing a photofixing system.

7. A method of forming a color image on a recording medium by means of an electrophotographic system which comprises the steps of forming an

electrostatic latent image by image exposure, visualizing the electrostatic latent image by development, transferring the visualized image onto the recording medium and fixing the transferred image, wherein

5           a developing agent used in the step of developing the electrostatic latent image contains a color toner comprising at least a binder resin and a colorant and further comprising a combination of:

10           a calixarene compound represented by the above formula (I) wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^5$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R^{14}$  and  $R^{15}$ , and x and y are as defined above, and

          an infrared absorbing compound which shows a light absorption peak at a wavelength ranging from 700 to 1000 nm; and

15           a photofixing system is used at a light emission energy density ranging from 1.0 to 6.0 J/cm<sup>2</sup> in the step of fixing the transferred image after transferring the image visualized by using the developing agent onto the recording medium.

20           8. The color image forming method according to claim 7, wherein the calixarene compound is a compound of the above formula (II).

          9. The color image forming method according to claim 7 or 8, wherein the infrared absorbing compound is phthalocyanine, naphthalocyanine or a mixture thereof.

25           10. The color image forming method according to claim 7 or 8, wherein 100 parts by weight of a toner is mixed with 0.1 to 10 parts by weight of the calixarene compound and 0.01 to 5 parts by weight of the infrared absorbing compound.

30           11. An apparatus for forming a color image on a recording medium by means of an electrophotographic system, comprising an image exposing device for forming an electrostatic latent image, a developing device for visualizing the electrostatic latent image, an image  
35           transferring device for transferring the visualized image onto the recording medium, and an image fixing device for

fixing the transferred image onto the recording medium,  
wherein

the developing device is loaded with a  
developing agent which contains a color toner comprising  
at least a binder resin and a colorant and further  
comprising a combination of:

a calixarene compound represented by the  
above formula (I) wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$  and  $R^5$ ,  $R^{11}$ ,  $R^{12}$ ,  
 $R^{13}$ ,  $R^{14}$  and  $R^{15}$ , and x and y are as defined above, and

an infrared absorbing compound which shows  
a light absorption peak at a wavelength ranging from 700  
to 1000 nm; and

the image fixing device is provided with a  
photofixing device having a light emission energy density  
ranging from 1.0 to 6.0 J/cm<sup>2</sup>.

12. The color image forming apparatus according to  
claim 11, wherein the calixarene compound is a compound  
of the above formula (II).

13. The color image forming apparatus according to  
claim 11 or 12, wherein the infrared absorbing compound  
is phthalocyanine, naphthalocyanine or a mixture thereof.

14. The color image forming apparatus according to  
claim 11 or 12, wherein 100 parts by weight of a toner is  
mixed with 0.1 to 10 parts by weight of the calixarene  
compound and 0.01 to 5 parts by weight of the infrared  
absorbing compound.